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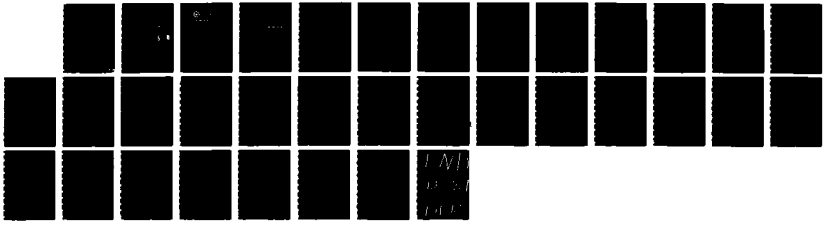

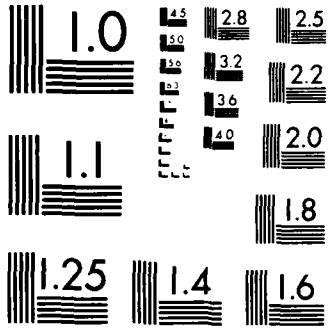

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TECHNICAL NOTE

YOUTH ATTITUDE TRACKING STUDY: HISTORICAL EVOLUTION AND CHARACTERISTICS

JANUARY 1985

1600 WILSON BOULEVARD ARLINGTON, VIRGINIA 22209

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This technical note summarizes for the first time the details of the evolution of the Youth Attitude Tracking Study (YATS) into its present form. It also discusses and presents comparative propensity data for all the administrations of YATS.

YATS has become the recognized principal source of data regarding the propensity of the military-age population for joining the military. Changes made in the Fall 1983 survey merited the redesignation of the survey as YATS II. Distinguishing YATS II from its predecessor are expanded market coverage and increased methodological and statistical rigor.

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The Defense Manpower Data Center (DMDC) has retraced the history, by necessity, as part of an effort to ensure the comparability of data in adjacent data collections. The purpose of this paper is to summarize in one place the details of the evolution of YATS into its present form.

The last section of this paper discusses and presents comparative propensity data for all the administrations of YATS in a manner that adjusts and compensates for the conversion of YATS into YATS II, as well as previous changes.

The changes have been made due to changing data requirements of both the policy and operational recruiting communities in the Office of the Secretary of Defense and the Services. Other changes are a result of budgetary constraints.

TECHNICAL NOTE

YOUTH ATTITUDE TRACKING STUDY:

Historical Evolution and Characteristics

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1600 Wilson Boulevard, Arlington, VA 22209

January 1985

This report was prepared for the Directorate of Accession Policy in the Office of the Deputy Assistant Secretary of Defense (Military Personnel and Force Management) (ODASD(MP&FM)(AP)). Any interpretations or viewpoints contained in this report should not be construed as an official Department of Defense position.

Preface

This Technical Note summarizes for the first time the details of the evolution of the Youth Attitude Tracking Study (YATS) into its present form. It also discusses and presents comparative propensity data for all the administrations of YATS.

As is always the case when working with an effort as large and complex as YATS, the preparation of this Technical Note would not have been possible without the assistance of many others. Within the Directorate of Accession Policy, Office of the Secretary of Defense, Dr. W. S. Sellman, Director, and Captain Louise C. Wilmot, USN, Deputy Director, have provided policy guidance for YATS and encouraged efforts to improve it.

In the Survey and Market Analysis Division, Defense Manpower Data Center, Zahava D. Doering and J. J. Miller provided overall direction and review. Vonda Kiplinger provided guidance and review in the analysis of weighting issues. Barbara A. Saunders, Elaine Sellman, and Mark Howell contributed by conducting historical research and verifying the weights used in past YATS.

At the Research Triangle Institute, James R. Chromy and Fredrick W. Immerman conducted the analysis reported in Appendix D of the Final Report: 1983 YATS and summarized here. At the Rand Corporation, Bruce Orvis and Martin Gahart conducted the weighting analysis of the YATS male propensity data for the pre-1982 surveys as well as that for females in those years in which they were interviewed. Without their insight, technical expertise, and attention to detail, the work summarized here would not have been possible.

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YOUTH ATTITUDE TRACKING STUDY:

Historical Evolution and Characteristics

Introduction

The Youth Attitude Tracking Study (YATS) will, in a few months, mark its tenth anniversary. What began as a relatively simple survey of military-age young males in Fall 1975 has evolved into a complex and sophisticated survey of young men, young women, and older men that is recognized as the principal source of data regarding the propensity of the military-age population for joining the military. While the YATS has evolved over the years, with changes made between adjacent data collections, changes made in the Fall 1983 survey merited the redesignation of the survey as YATS II. Distinguishing YATS II from its predecessor are expanded market coverage and increased methodological and statistical rigor.

Few individuals who currently use the YATS data, or participate in the annual execution of the survey, were present at its creation in 1975. Thus, there is little institutional memory of how the YATS developed into its present form and no context in which to relate the most recent findings to those obtained in earlier years. The institutional memory that exists regarding YATS resides in the many published reports that have been produced by contractors over the last ten years and in internal memoranda in the Office of the Secretary of Defense (OSD) and in the Services. Most current users of YATS are either not in possession of all these reports and memoranda, nor do they have the time or inclination to trace fully the history of the survey. The Defense Manpower Data Center (DMDC) retraced the history, by necessity, as part of an effort to ensure the comparability

of data in adjacent data collections. Thus, the purpose of this paper: to summarize in one place the details of the evolution of YATS into its present form. The last section of this paper, which is less historical in nature, discusses and presents comparative propensity data for all the administrations of YATS in a manner that adjusts and compensates for the conversion of YATS into YATS II, as well as previous changes. This paper does not provide justification for changes which have been made, as the documentation frequently omits it. In general, these changes have been made to meet the changing data requirements of both the policy and operational recruiting communities in OSD and the Services, by incorporating new statistical and data collection methodologies. In addition, some changes have resulted from budgetary constraints.

Summary of Details of Survey Operations

The details of the Youth Attitude Tracking Study (YATS) survey operations including the wave number, data of survey, contractor, target markets sampled, sample sizes, and the data collection periods are summarized in Table 1. Each of these details will be discussed in turn.

Wave number. This is a sequential number assigned to each YATS data collection effort.

Date of survey. The season (Spring/Fall) year of the data collection effort.

Contractors. Since it began, only two contractors have conducted YATS. Waves 1 through 13 (Fall 1975 through Fall 1982) were performed by Market Facts, Inc. As a result of the competition for the YATS contract, Waves 14 and 15 (Fall 1983 and Fall 1984) were conducted by the Research Triangle Institute (RTI). In addition to certain methodological differences which are discussed below, the most significant change in the conduct of this survey resulting from the change in contractors was the implementation of Computer Assisted Telephone Interviewing (CATI) in Wave 14 (Fall 1983) by RTI. Prior to this wave, most telephone interviews were conducted using traditional paper and pencil recording methods.

Within the Department of Defense (DoD), the Directorate of Accession Policy (AP) in the Office of the Deputy Assistant Secretary of Defense (Military Personnel and Force Management) (ODASD(MP&FM)) was directly responsible for monitoring the technical performance of contractors in Waves 1 through 12 (Fall 1975 through Fall 1981). With Wave 13 (Fall 1982) these responsibilities were transferred to the Market Research Branch, Survey and

TABLE 1

YOUTH ATTITUDE TRACKING STUDY

Summary of Details of Survey Operations

Wave	Date	Contractor	Samples[a]			Data Collection	
			Males		Females		
			16-21	22-29	16-21	Period	Number of Days
1	Fall 1975	Market Facts	3,167	0	0	10/27-11/29/75	34
2	Spring 1976	Market Facts	3,008	0	0	4/22-5/17/76	26
3	Fall 1976	Market Facts	5,475	0	0	10/19-11/30/76	43
4	Spring 1977	Market Facts	5,520	0	0	4/11-5/28/77	48
5	Fall 1977	Market Facts	5,280	0	0	10/18-11/27/77	40
6	Spring 1978	Market Facts	4,006	0	0	1/1-6/15/78	166
7	Fall 1978	Market Facts	5,199	0	0	10/6-12/8/78	63
8	Spring 1979	Market Facts	5,203	0	0	4/15-5/27/79	42
9	Fall 1979	Market Facts	5,187	0	0	10/1-11/9/79	39
10	Spring 1980	Market Facts	5,217	0	0	3/31-5/9/80	39
11	Fall 1980	Market Facts	5,111	0	5,252	10/17-12/10/80	54
12	Fall 1981	Market Facts	5,201	0	5,213	10/21-12/16/81	65
13	Fall 1982	Market Facts	5,993	0	1,251	9/20-11/7/82	48
14	Fall 1983	Research Triangle	4,948	1,153	1,313	9/12-12/21/83	100
15	Fall 1984	Research Triangle	5,058	1,378	1,515	8/1-9/30/84	61

a) Criteria after inclusion in the survey were:

1) No prior or current military service,
2) Not beyond the second year of college,
3) Fall within the age limits specified.

these responsibilities were transferred to the Market Research Branch, Survey and Market Analysis Division, Defense Manpower Data Center (DMDC). Policy guidance for YATS has always resided in ODASD(MP&FM)(AP), or its predecessors, with assistance and advice from the Joint Market Analysis and Research Committee (JMARC).

Samples. Waves 1 through 10 (Fall 1975 through Spring 1980) were semi-annual surveys, conducted in the Spring and Fall, of approximately 5,200 (Wave 3 and beyond) young males, aged 16-21. Beginning with Wave 11 (Fall 1980) YATS became an annual survey and females, in approximate equal proportion to the males, were included in the survey. The size of the female sample was reduced to approximately 1,300 in Wave 13 (Fall 1982) and succeeding waves. In Wave 14 (Fall 1983) a nationally representative sample of older men, aged 22-29, was introduced.

In all waves of the YATS, the basic eligibility criteria have remained unchanged with the exception of the participation of respondents in ROTC programs. The basic eligibility criteria for inclusion in the sample require that respondents have 1) no prior or current military service; 2) not be beyond the second year of college; and 3) fall within the age limits of 16-21 years for young males and females and 22-29 years for the older males. In Waves 1 through 12 (Fall 1975 through Fall 1981), participation in any form of ROTC was not considered to be military service. In Wave 13 (Fall 1982) participation in any form of ROTC was considered to be military service and participants were excluded from the survey. In Wave 14 and 15 (Fall 1983 and Fall 1984), college ROTC was considered to be military service while high school ROTC was not. Accordingly, those individuals who participated in high school ROTC were eligible for inclusion in the survey.

Data Collection Period. For all the waves appearing in Table 1 the median duration of the data collection period was 48 days. The shortest data collection period was 26 days for Wave 2 (Spring 1976) in which 3,008 interviews were conducted and the longest was 166 days in Wave 6 (Spring 1978) in which 4,006 interviews were conducted. Even though data collection in Wave 6 spanned a five and one-half month period, the report indicates that statistical tests revealed no month-to-month differences and the data were collapsed and treated similarly to the other waves.

Data collection for the Spring waves normally began in mid-April except for Wave 6 (Spring 1978) which began at the beginning of January. Data collection for the Fall waves normally began in the mid-September to mid-October period. Wave 15 (Fall 1984) began on August 1 so that interviewing would be entirely completed prior to the end of the FY 1984 Advertising Mix Test, which ended on September 30, 1984. (YATS Waves 14 and 15 were among the principal measuring instruments for this test).

Summary of Survey Methodology

Table 2 summarizes the sampling methods, sampling strata, and weighting schemes employed over the 15 waves of YATS. The sampling method will be discussed first, followed by the sample strata and weighting scheme together since the latter is dependent on the former.

Sampling method. Since its beginning YATS has employed random digit dialing techniques to locate eligible respondents. The published reports for Waves 1 through 4 (Fall 1975 through Spring 1977) are uninformative as to whether a true random digit dialing procedure was employed or whether some procedures to enhance efficiency were utilized. Beginning with Wave 5 (Fall 1977) and continuing through Wave 12 (Fall 1981), the dialing procedures were modified to introduce the use of "seed" numbers to enhance efficiency. By identifying residential telephone exchanges in advance of the actual survey screening process, fewer calls were needed since businesses and non-working numbers were eliminated ahead of time. These seed numbers were obtained from a 1977 national sample of 40,000 households selected from a panel of 100,000 in the contiguous United States. Each of these 40,000 households was asked to select "n" telephone numbers from their local telephone directories. These numbers served as the basis for telephone dialing in Waves 5 through 12 (Fall 1977 through Fall 1981).

Beginning with Wave 13 (Fall 1982), the random digit dialing procedures were further modified to employ the techniques developed by Waksburg. Instead of the seed number approach, the Waksburg method is a two-stage process in which calls are made to randomly selected telephone exchanges to

TABLE 2

YOUTH ATTITUDE TRACKING STUDY

Summary of Survey Methodology

Wave	Date	Sampling Method	Sampling Strata	Weighting Scheme
1	Fall 1975	Random Digit Dial (RDD) Telephone	200 respondents in each of 13 Tracking areas plus 400 from the balance of the country.	Individual weight = Percentage of total Estimated Military Available in each of 156 cells (13 Tracking Areas X 6 Ages X 2 Races) ÷ Percentage of total respondents in each cell.
2	Spring 1976	Same as Wave 1	Same as Wave 1	Same as Wave 1
3	Fall 1976	Same as Wave 1	200 respondent in each of 26 Tracking Areas	Individual weight = Tracking Area Weight (Percentage of total Estimated Military Available in each Tracking Area ÷ Percentage of total respondents in each Tracking Area) X Age/Race Weight (Percentage of total Estimated Military Available for each of 12 Age/Race cells ÷ Percentage of total respondents in each Age/Race cell).
4	Spring 1977	Same as Wave 1	Same as Wave 3	Same as Wave 3
5	Fall 1977	RDD with telephone numbers generated from seed numbers	Same as Wave 3	Same as Wave 3
6	Spring 1978	Same as Wave 5	Same as Wave 3	Same as Wave 3
7	Fall 1978	Same as Wave 5	Same as Wave 3	Same as Wave 3
8	Spring 1979	Same as Wave 5	Same as Wave 3	Same as Wave 3
9	Fall 1979	Same as Wave 5	Same as Wave 3	Same as Wave 3
10	Spring 1980	Same as Wave 5	Same as Wave 3	Same as Wave 3
11	Fall 1980	Same as Wave 5	Same as Wave 3	Household population estimates projected from the 1970 Census substituted for Estimated Military Available in the formulae first used in Wave 3.
12	Fall 1981	Same as Wave 5	Same as Wave 3	Same as Wave 11
13	Fall 1982	RDD-Waksburg	90 males from each of 66 MEPS. National sample of females by State in proportion to State population.	For males, total population in each MEPS based on estimates projected from the 1980 Census and 12 national Age/Race populations were substituted for Estimated Military Available in the formulae first used in Wave 3. For females, total population in each State and 12 Age/Race categories were used.
14	Fall 1983	Same as Wave 13	Households within each MEPS	Individual weight based on the number of households per county projected from the 1980 Census and probabilities of selection of eligible respondents.
15	Fall 1984	Same as Wave 13	Same as Wave 14	Same as Wave 14

identify those which contain primarily residential households as opposed to businesses, institutions, or non-working numbers. Those exchanges which are identified as residential are designated as "clusters" which, in the second stage of the process, are used to generate telephone numbers to be called to find additional households and respondents.

Sampling Strata and Weighting Schemes. In the first two Waves (Fall 1975 and Spring 1976) approximately 200 respondents in each of 13 special geographic areas defined for YATS, called "Tracking Areas," were interviewed. These Tracking Areas cumulatively accounted for 65% of the U.S. "Estimated Military Available" (EMA) population.* The Tracking Areas were selected by using criteria that included 1) maximizing the percentage of the potential applicant pool covered; 2) providing sufficient geographical dispersion; and 3) limiting the number of military recruiting units in each Tracking Area to three or less per Service. Also interviewed were 400 respondents from the balance of the country not included in the 13 Tracking Areas.

Weighting of respondents was accomplished by first assigning each respondent to a cell of a 13 x 6 x 2 matrix. This matrix consisted of 13

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*The Estimated Military Available (EMA) population was based on estimates generated by the method developed by Huck, D. F., Crews, A., and Siea, G. P. (Sept. 1978) The Qualified Military Available Projection System, General Research Corporation, McLean, VA, Report CR-224.

Tracking Areas, 6 age categories (single years of age, 16-21), and 2 racial categories (white and non-white). The weight for each individual within each cell was calculated by dividing the percentage of total EMA in that cell by the percentage of total respondents falling in that cell. (The report does not discuss how weights were calculated for the 400 respondents from the balance of the country.)

Beginning with Wave 3 (Fall 1976) and continuing through Wave 12 (Fall 1981) the sampling strata were revised so that 200 respondents from each of 26 Tracking Areas were interviewed. These 26 Tracking Areas encompassed the entire contiguous United States, and therefore, 100% of the EMA population. Each Tracking Area roughly coincided with the major recruiting areas used by the Services at that time.

The weighting method employed in Waves 1 and 2 (Fall 1975 and Spring 1976) produced considerable variation among the weights calculated for each of the 156 cells and, thus, reduced statistical precision. Accordingly, it was revised in Wave 3 (Fall 1976) both to increase statistical precision and to account for the change in sampling strata. The revised scheme, employed in Waves 3 through 11 (Fall 1976 through Spring 1980), was one in which fewer weights were calculated and in which the individual weight was the product of a Tracking Area weight and an age/race weight.

The Tracking Area weight was calculated by dividing the percentage of total EMA population in each Tracking Area by the percentage of total respondents in each Tracking Area. The age/race weight was calculated by

dividing the percentage of total national EMA population for each of twelve age/race cells (6 age cells x 2 race cells) by the percentage of total respondents in each age/race cell.

With Wave 11 (Fall 1980) the weighting scheme was again revised. Household population estimates of military available youths, projected from the 1970 Census were substituted for the EMA estimates in the two weighting components introduced in Wave 3 (Fall 1976).

In Wave 13 (Fall 1982) the 66 Military Entrance Processing Stations (MEPS) covering the contiguous United States were used as the sampling strata for the males, instead of the 26 Tracking Areas first used in Wave 3 (Fall 1976). The overall sample size was increased by approximately 800 males with 90 from each of the 66 MEPS being interviewed. The size of the female sample was reduced from approximately 5,200 to 1,250, and the sample was selected on a state-by-state basis with the number of respondents in each state drawn in proportion to each state's population.

For the males, the weighting formulae used in Waves 11 and 12 (Fall 1980 and Fall 1981) were used in Wave 13 (Fall 1982) with modifications for the MEPS-based sampling and the availability of 1980 Census data. Accordingly, the Wave 13 individual weight was the product of the MEPS weight (percentage of total male population, aged 16-21, in the MEPS divided by the percentage of total respondents in that MEPS) and the age/race weight (percentage of total male population in each of 12 age/race

cells divided by the percentage of total respondents in each age/race cell). Population estimates for these calculations were based on the 1980 Census rather than projections from the 1970 Census as were used in Waves 11 and 12 (Fall 1980 and Fall 1981). The weights for females were calculated in a similar manner, but used state population estimates instead of MEPS population estimates.

At the time the Wave 13 (Fall 1982) data were being analyzed and the report prepared, it was recognized that these changes, particularly the change from 1970 to 1980 Census estimates, might result in differences between the Wave 13 (Fall 1982) and Wave 12 (Fall 1981) data that were more an artifact of weighting than actual differences between the two samples. Accordingly, a thorough examination of demographic comparisons was performed as well as a restatement of the Wave 12 (Fall 1981) data using Wave 13 (Fall 1982) weights. This examination did not yield any significant findings indicating that the data for the two waves were not comparable. Thus, reweighting and restatement of the Wave 12 (Fall 1981) data were not necessary.

With the change in the contractor executing the YATS survey, Wave 14 (Fall 1983) saw changes in both the sampling strata and weighting scheme. The sampling strata for all target groups, the young males, young females, and older males, were households within each MEPS. Individual weights were based on these sampling strata, using the number of households per county having eligible respondents, and included consideration of the probabilities of selection of eligible respondents.

Since the Wave 14 (Fall 1983) sampling strata and weighting scheme were different than those used in the prior years, comparability with prior waves again became an issue. Thus, this historical reconstruction and related analyses were undertaken. The next section of this paper discusses the comparability of the YATS data over successive waves and the methodology employed in the restatement of the data for Waves 2 through 13.

Restatement of Waves 2 through 13 Propensity Data

The Issue. As has been described earlier in this paper, the Wave 13 (Fall 1982) data were weighted using population estimates projected from the 1980 Census. The estimates were for all males and females, aged 16-21, regardless of whether or not they met the other eligibility criteria for participation in the survey (i.e., not beyond the second year of college and no prior or current military service). In contrast, the weighting scheme employed by RTI for Wave 14 (Fall 1983) YATS used MEPS household counts (by county) and the probabilities of selection of eligible respondents generated from the screening interviews. These estimates were not for all males and females, aged 16-21, but only for those also meeting the other eligibility criteria.

As a result of these differences, the two sets of data are not strictly comparable. The Market Facts Inc. approach gives higher weights to older respondents than does the military-eligible weighting scheme used by RTI, thereby producing lower estimates of positive propensity. When all eligibility criteria are applied, the rate of study eligibility decreases with age, beginning at age 18. Thus weighting in such a way that gives older individuals equal weight to that of the younger individuals biases the final positive propensity rate downward.

DMDC is fully satisfied that the procedures employed by RTI in weighting the Wave 14 (Fall 1983) YATS data are both methodologically sound and provide the most accurate measure of propensity for the target population. Accordingly, it was necessary to evaluate the propensity data pre-

sented in previous YATS reports and develop procedures that would enable restatement of all waves of the previously reported data to be directly comparable to those reported by RTI.

Both RTI and the Rand Corporation have closely studied the propensity series comparability issue and proposed similar solutions. RTI's efforts were concentrated on comparing the Wave 13 (Fall 1982) and Wave 14 (Fall 1983) data for young (16-21 year old) males. This work is reported in detail in Appendix D of the Fall 1983 YATS Final Report, and will be summarized here. Rand corroborated RTI's findings for Wave 13 (Fall 1982), and extended the analysis to Waves 2 through 12 (Spring 1976 through Fall 1981) for the males and Waves 11 through 13 (Fall 1980 through Fall 1982) for the females. Their analysis is also summarized below.

The RTI analysis. RTI first performed a series of analyses in which the 1982 propensity data were initially weighted by the MEPS x age/race weight calculated by Market Facts. These weighted data were further adjusted for the age, race and MEPS distributions for the 1983 sample. The 1983 adjustment factors were applied both individually and in combination with each other to identify the importance of each factor. This analysis confirmed that age was the key variable for establishing comparable estimates of propensity for Wave 13 (Fall 1982) and Wave 14 (Fall 1983).

Further evaluation of the weights calculated by Market Facts revealed that the MEPS national weights, when applied to the 1982 propensity data without any age/race adjustment, produced a reasonable approximation of the 1983 age distribution. The effect of this approach is shown in Table 3.

Table 3

YOUTH ATTITUDE TRACKING STUDY

Comparison of Wave 13 (Fall 1982) Young Male Positive Propensity[a]

As Originally Reported and as Reweighted

	Wave 13 (Fall 1982)	
Service	Originally Reported	Reweighted
Army	14.5	16.0
Navy	13.0	14.4
Marine Corps	10.5	11.7
Air Force	17.4	18.7
Any Active Duty Service	32.7	35.8

[a]Positive propensity respondents are those who stated they either "definitely" or "probably" will be serving in one or more of the four Active Duty Services in the next few years.

As can be seen, the level of positive propensity for each Service and for any Active Duty Service is higher than that previously reported. These results are not unexpected, given the age bias in the originally reported figures.

The Rand Corporation analysis. The Rand Corporation studied the propensity series comparability issue somewhat differently than RTI, and extended the restatement of propensity to Waves 2 through 12 (Spring 1976 through Fall 1981) for the males and Waves 11 through 13 (Fall 1980 through Fall 1982) for the females.

Rand worked with three weighting schemes in studying the issue. Like RTI, it began with an analysis of Wave 13 (Fall 1982) and Wave 14 (Fall 1983) propensity data. The first approach divided the 1982 and 1983 young male (16-21) samples into 60 cells based on age (4 categories), race (white and non-white), and geographical region (9 for whites, 6 for non-whites). The 1982 propensity results were then weighted by the MEPS national weighting factor provided by Market Facts and means calculated for each cell. Next, each cell was weighted in proportion to the 1983 sample of 16-21 year old males that fell in that cell and the weighted cell means summed. The second approach was similar but used only 16 cells based on 4 geographical regions for all respondents, 2 age groups and 2 race groups. The third approach, following RTI's lead, weighted the 1982 data by the MEPS national weight alone.

All three procedures yielded similar results, with the more complex procedures providing marginally more precise results. The "MEPS national weights only" procedure produced the same results as obtained by RTI. The

propensity data for Waves 2 through 12 (Spring 1976 through Fall 1981) were evaluated in a similar manner as above, but the analyses were based on Tracking Area weights rather than MEPS national weights. As was the case before, all three methods yielded similar results. Table 4 summarizes the results of the Rand reweighting using the Tracking Area or MEPS national weights as adjustment factors, as discussed above.

The data for females for Waves 11 through 13 (Fall 1980 through Fall 1982) were also evaluated by Rand using the same 16-cell and geographic weight only procedure (Tracking Area weights for Waves 11 and 12 and state weights for Wave 13 as provided by Market Facts) as were employed in the analysis of the data for males. Due to the relatively small size of the female samples, the 60-cell approach was not tested. Unlike the results obtained for the males, these two weighting procedures produced results that were systematically different from each other. Accordingly, Rand showed that it would be desirable to use adjustment factors, in addition to the geographical weights, in order to make Waves 11 through 13 data comparable to the Wave 14 (Fall 1983) data.

Two additional procedures were evaluated. The first was a modified 16-cell region/age/race adjustment that used the 1980-1982 average sample proportions in each of the 16-cells so that one set of weights would be used for all three waves. The second approach initally weighted the results using the Market Facts, Inc. geographical region by age/race formula and then adjusted the result to reflect the Wave 14 (Fall 1983) age distri-bution. Compared to the original 16-cell weighting procedure the modified 16-cell weighting procedure produced similar and satisfactory

Table 4

YOUTH ATTITUDE TRACKING STUDY

Comparison of Young Male Positive Propensity[a]

As Originally Reported and as Reweighted[b]

	Survey Wave														
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Service	Fall 1975	Spring 1976	Fall 1976	Spring 1977	Fall 1977	Spring 1978	Fall 1978	Spring 1979	Fall 1979	Spring 1980	Fall 1980	Fall 1981	Fall 1982	Fall 1983	Fall 1984
Army	n/c	**10.8**	**11.4**	**13.8**	**14.8**	**14.0**	**13.9**	**13.0**	**12.9**	**15.1**	**14.6**	**15.0**	**16.0**	**17.5**	**14.3**
	18.4	13.1	14.5	11.8	12.7	12.4	11.8	11.1	11.8	14.5	13.0	13.2	14.5	n/a	n/a
Navy	n/c	**13.4**	**13.8**	**17.5**	**17.5**	**17.0**	**16.2**	**15.1**	**14.5**	**16.6**	**14.4**	**15.4**	**14.4**	**13.0**	**10.9**
	19.6	16.4	16.5	15.2	15.5	15.2	14.4	13.5	13.4	15.8	13.1	14.0	13.0	n/a	n/a
Marine Corps	n/c	**8.9**	**9.3**	**12.7**	**12.7**	**12.9**	**11.8**	**11.1**	**10.8**	**12.7**	**12.3**	**12.4**	**11.7**	**12.1**	**9.6**
	14.9	11.8	12.4	10.7	11.0	11.4	10.0	9.5	10.0	12.1	10.8	11.0	10.5	n/a	n/a
Air Force	n/c	**14.7**	**15.4**	**18.1**	**18.3**	**19.2**	**17.7**	**16.4**	**16.6**	**19.4**	**20.6**	**20.9**	**18.7**	**18.8**	**15.3**
	20.4	17.5	17.9	15.7	15.7	17.0	15.6	14.0	15.3	18.3	18.6	18.5	17.4	n/a	n/a
Any Active Duty Service	n/c	**29.4**	**30.5**	**33.8**	**34.1**	**34.6**	**32.4**	**30.8**	**30.0**	**34.7**	**33.7**	**34.3**	**35.8**	**35.4**	**29.9**
	31.2	24.8	26.4	29.6	29.9	31.1	28.2	27.0	27.6	32.8	30.0	30.5	32.7	n/a	n/a

[a]Positive propensity respondents are those who stated they either "definitely" or "probably" will be serving in one or more of the four active duty services in the next few years.

[b]The percentage in **bold-faced type** (upper value of each pair of percentages) is the reweighted positive propensity rate. The percentages in light-faced type (lower value of each pair of percentages) is the positive propensity rate originally reported by Market Facts, Inc.

n/c - not calculated

n/a - not applicable

results, while the age adjustment procedure produced positive propensity estimates that were systematically lower than the original 16-cell and the modified 16-cell weighting procedures. Based on these findings Rand concluded that the modified 16-cell weighting procedure produced the optimum solution for restating Waves 11 through 13 propensity data for females. Table 5 presents the reweighted data.

Tables 6, 7, and 8 provide the technical information that will permit YATS data file users to apply the weighting schemes developed by RTI and Rand in their own analyses. Presented in Table 6 is a summary of the geographical weight (Tracking Area, MEPS, or state weight) to be used, and its location (card/column numbers or variable name) in the data file. The Tracking Area weights for the males in Waves 2 through 5 (Spring 1976 through Fall 1977) were not included in the original data files. Accordingly, Table 7 lists these weights as a supplement to Table 6. The weighting factors developed by Rand and used in their modified 16-cell weighting procedure for females in Waves 11 through 13 (Fall 1980 through Fall 1982) are presented in Table 8.

Table 5

YOUTH ATTITUDE TRACKING STUDY

Comparison of Female Positive Propensity[a]

As Originally Reported and as Reweighted[b]

Service	Survey Wave (11) Fall 1980	(12) Fall 1981	(13) Fall 1982	(14) Fall 1983	(15) Fall 1984
Army	**6.3** 5.3	**7.0** 6.4	**6.1** 5.5	**4.4** n/a	**5.6** n/a
Navy	**6.6** 5.9	**7.1** 6.3	**5.6** 5.3	**4.7** n/a	**4.3** n/a
Marine Corps	**5.2** 4.6	**5.0** 4.4	**3.8** 3.8	**2.6** n/a	**3.3** n/a
Air Force	**9.5** 8.7	**9.4** 8.8	**8.8** 8.6	**6.8** n/a	**9.0** n/a
Any Active Duty Service	**14.8** 13.3	**15.7** 14.3	**14.5** 13.7	**11.7** n/a	**13.2** n/a

[a]Positive propensity respondents are those who stated they either "definitely" or "probably" will be serving in one or more of the four active duty services in the next few years.

[b]The percentage in **bold-faced type** (upper value of each pair of percentages) is the reweighted positive propensity rate. The percentages in light-faced type (lower value of each pair of percentages) is the positive propensity rate originally reported by Market Facts, Inc.

TABLE 6

YOUTH ATTITUDE TRACKING STUDY

Summary of Geographic Weight and Data File Location

for Proper Weighting of YATS Data

		Males		Females	
Wave	Date	Geographic Weight	File Location Card/Column[a]	Geographic Weight	File Location Card/Column
2	Spring 1976	Tracking Area	See Table 7	-	-
3	Fall 1976	Tracking Area	See Table 7	-	-
4	Spring 1977	Tracking Area	See Table 7	-	-
5	Fall 1977	Tracking Area	See Table 7	-	-
6	Spring 1978	Tracking Area	10/11-14	-	-
7	Fall 1978	Tracking Area	11/37-40	-	-
8	Spring 1979	Tracking Area	7/41-44	-	-
9	Fall 1979	Tracking Area	7/35-38	-	-
10	Spring 1980	Tracking Area	7/21-24	-	-
11	Fall 1980	Tracking Area	7/56-59	Tracking Area[b]	7/71-74[b]
12	Fall 1981	Tracking Area	8/11-14	Tracking Area[b]	8/26-29[b]
13	Fall 1982	MEPS	10/32-35	State[b]	10/47-50[b]
14	Fall 1983	MEPS	WINT1[c]	MEPS	WINT1[c]
15	Fall 1984	MEPS	WINT[c]	MEPS	WINT[c]

[a]The Tracking Area weights for males in Waves 2-5 (Spring 1976 - Fall 1977) were not included in the original data file. These weights are presented in Table 7 of this Technical Note.

[b]In addition to weighting each female case by the Tracking Area/State weight, each case must be further weighted using the appropriate factor presented in Table 8 of this Technical Note.

[c]Waves 14 and 15 (Fall 1983 and Fall 1984) data files are in SAS (Statistical Analysis System) format. Accordingly, the variable name should be used.

Table 7

YOUTH ATTITUDE TRACKING STUDY

Tracking Area Weights

for Waves 2-5 (Spring 1976 - Fall 1977)

Tracking Area		Survey Wave			
		(2)	(3)	(4)	(5)
Number	Name	Spring[a] 1976	Fall 1976	Spring 1977	Fall 1977
01	Chicago	.72	.76	.97	1.38
02	Harrisburg	.65	.74	.91	1.04
03	New York City	.75	1.07	1.23	1.40
04	Philadelphia	-	.62	.67	.79
05	Boston	-	.52	.62	.75
06	Albany/Buffalo	.88	.89	1.05	1.40
08	Pittsburgh	-	.70	.59	.90
09	Washington, D.C.	.44	.50	.59	.74
10	Richmond/North Carolina	-	1.03	1.10	1.24
12	South Carolina/Georgia	-	.71	.74	.94
13	Florida	.53	.70	.70	.90
14	Alabama/Mississippi/Tennessee	1.01	1.17	1.40	1.56
15	New Orleans	-	.34	.40	.44
16	Texas	.94	1.11	1.28	1.55
17	Arkansas	-	.79	.90	.98
19	Kentucky	-	.45	.53	.62
20	Des Moines	-	.35	.38	.44
21	Ohio	.78	.97	.95	1.27
22	Michigan/Indiana	1.18	1.47	1.38	1.67
23	Wisconsin	-	.40	.41	.45
24	Minnesota/North Dakota/ South Dakota/Nebraska	.51	.68	.50	.88
25	Southern California/Arizona	.96	1.12	1.25	1.36
26	Northern California	.63	.77	.86	.96
27	New Mexico/Colorado/Wyoming	-	.51	.58	.76
28	Washington/Oregon	-	.53	.60	.78
29	Kansas City/Oklahoma	-	.75	.81	.92

[a]These weights apply only to the 200 respondents in each of the 13 Tracking Areas. Weights are unavailable for those 400 respondents from the balance of the country.

Table 8

YOUTH ATTITUDE TRACKING STUDY

Adjustment Factors Used in Reweighting

Female Propensity Data

for Waves 11-13 (Fall 1980-Fall 1982)

	Age			
	16-17		18-21	
Census Region	White[a]	Non-white[a]	White[a]	Non-white[a]
Northeast	.6970	.3953	.9002	1.3711
North Central	1.1474	.5163	1.2445	.9042
South	.9272	.9224	1.0774	.8496
West	1.3485	1.6051	1.0107	.7529

[a]For Waves 11 and 12 (Fall 1980 and Fall 1981) only those respondents who, in response to Question 23 of the YATS questionnaire stated their race as white, were so classified. All other respondents were classified as non-white. Those respondents who did not answer Question 23 were excluded from the analysis. For Wave 13 (Fall 1982) the same classification was used based on Question 30 of the YATS questionnaire.

Summary

The increased utilization of YATS as a data source for policy and program deliberations has led to an increased focus on its methodology in the past two to three years. Consequently, a common misconception has been that the changes that have occurred in the study have resulted principally from a change in contractors. This technical note suggests the contrary. More often that not, each successive wave of YATS has seen methodological changes in order to enchance its reliability or to meet the changing needs of its users.

This technical note summarizes these changes, describes the weighting schemes employed in the various waves of YATS, and presents a methodology that allows all data across all waves of the YATS to be compared.

END

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